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Case Report

A case of measles during pregnancy: Case report and management

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Abstract
Measles is a viral infection known for its high contagiousness and serious complications. It caused approximately 136,00 deaths worldwide in 2022. It may lead to more severe complications in pregnant women due to the weakened immune system. In this article, the symptoms, complications, and treatment process of a 26-year-old woman who had measles while five weeks pregnant were examined. The patient presented with symptoms of upper respiratory tract infection, but treatment was started after a maculopapular rash and positive measles PCR test. During the treatment process, nasal oxygen, antihistamines, and other supportive treatments were administered to control complications. Since measles infection during pregnancy carries serious risks, early diagnosis and close follow-up are important. Additionally, it is emphasized that vaccination rates should be increased.

Keywords
Pregnancy, Measles, Complications, Measles Treatment

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Introduction

The measles virus is a highly contagious pathogen that spreads easily through the air and can cause severe complications in infected individuals. According to the reports of the World Health Organization (WHO) reports, approximately 136,000 people worldwide died due to measles in 2022 [1]. Measles can cause serious complications such as pneumonia, otitis, conjunctivitis, hepatitis, thrombocytopenia, and fetal death in pregnant women [2]. In this case, the clinical course and treatment management of a patient who had measles during the fifth week gestation period are presented. Informed consent was obtained from the patient.

Case Report

A 26-year-old, five-week pregnant woman with no known comorbidities presented to the emergency room with complaints of sore throat, headache, cough, and widespread body pain. Initially diagnosed with upper respiratory tract infection, symptomatic treatment was prescribed, and she was discharged from the emergency department. However, on the fourth day of her symptoms, she developed maculopapular rashes starting from her neck and progressing to the trunk. The patient returned to the hospital and was admitted to the infectious diseases unit with a preliminary diagnosis of measles. There was no history of measles exposure in her family or surroundings. The patient had no known allergy history and no measles vaccination. In her physical examination during her first hospitalization, his general condition was fair to good; she was conscious, cooperative, and oriented. The oropharynx was hyperemic, but there was no Koplik's spot, and rales were heard in the bases when auscultating the lungs. Maculopapular rashes were widespread, mostly on the trunk. The patient's arterial blood pressure was 110/80 mm/Hg, oxygen saturation: 90%, respiratory rate: 24/min, laboratory tests show leukocyte count in blood: 9240/μL, lymphocyte count: 3810/μL, platelet: 110,000/ml, CRP: 25 mg/L, AST: 120 ALT: 147, total bilirubin: 0.3 mg/dL, anti-HIV: negative, VDRL: negative.

The patient was started on nasal oxygen support, antihistamines, paracetamol, and intravenous 0.9% isotonic saline solution. A nasopharyngeal swab was sent for measles PCR testing. For fetal well-being, she was consulted by the obstetrics and gynecology department every other day. The rashes did not respond to antihistamine treatment. On the third day of her hospitalization, the patient's platelet count dropped to 35,000/μL, and platelet monitoring was performed twice daily until the values improved. The patient developed otitis, and treatment with 1 g of ceftriaxone IV twice a day was initiated. By the fourth day of her hospitalization, she no longer required oxygen support. On the sixth day, her rashes faded, and AST and ALT levels returned to normal. The patient, who did not require platelet replacement, had a platelet count of 168,000/μL on the seventh day. The measles PCR result was positive. The obstetrics and gynecology department indicated that there was no risk of miscarriage and that the patient had no active complaints, so she was discharged with a recommendation for routine follow-up at the obstetrics and gynecology outpatient clinic.

Discussion

Measles can lead to more serious complications, especially in pregnant women, due to their suppressed immune system. The risk of measles infection in pregnant women increases due to the weakened immune response against viral infections [3]. This may lead to a more severe course of the infection and the emergence of more serious complications. Complications of thrombocytopenia, otitis, and hepatitis were observed in our case. Thrombocytopenia is one of the rare but known complications of measles and is important in terms of bleeding risk [4]. Complications such as otitis and hepatitis may also occur more frequently, especially during pregnancy, due to the weakened immune system [2].

The risks caused by the measles virus during pregnancy are quite serious for both the mother and the fetus. Pregnant women with measles infection may experience consequences such as premature birth, miscarriage, intrauterine growth retardation, and fetal death. Therefore, it is important to closely monitor the health status of the fetuses of infected pregnant women. These complications may result from hormonal and immune changes during pregnancy. In women who have measles during pregnancy, early diagnosis, and ongoing follow-up are essential to maintain the health of the fetus and prevent complications. Supportive treatment plays an important role in reducing complications and relieving symptoms [5].

In recent years, the incidence of measles has increased in our country, and according to WHO data, Turkey has one of the highest numbers of measles cases in the European region [6]. This increase is due to low vaccination rates and insufficient immunization efforts in the community. Measles vaccination history should be questioned during routine pre-pregnancy screening, and unvaccinated women should be vaccinated. Since the measles vaccine is a live vaccine, it is not recommended to be administered during pregnancy; however, it is extremely important for women planning pregnancy to be informed and vaccinated before pregnancy [7].

Conclusion

Our experience with this case emphasizes the seriousness of measles infection during pregnancy and the need for careful management of complications. Patients who have measles during pregnancy should be closely monitored for fetal death, premature birth, and other complications. The importance of measles vaccination is an issue that should be kept on the agenda by physicians for both individual and public health.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content, including study design, data collection, analysis and interpretation, writing, and some of the main line, or all of the preparation and scientific review of the contents, and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Conflict of interest

The authors declare that there is no conflict of interest.

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